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| 09/964,947      | 09/26/2001  | James Chi-Shun Tsiao | 490.11              | 3725             |

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| EXAMINER |
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SKED, MATTHEW J

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| ART UNIT | PAPER NUMBER |
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2655

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/964,947

Applicant(s)

TSIAO ET AL.

Examiner

Matthew J Sked

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,7-10,12 and 26-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7-10,12 and 26-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The objection to the disclosure and claims is withdrawn in view of the applicant's arguments.
2. The objection to claims 13 and 16 under 37 CFR 1.75 (c) is withdrawn in view of the applicant's amendments.
3. Claims 1 and 26 have been amended to more clearly claim the invention as a handheld personal assistant that categorizes data in a database for retrieval based on both voice recognition and natural language understanding to determine who is speaking and the context of the spoken query.
4. Claims 3, 6, 11, 13-25 and 29 have been cancelled.
5. Applicant's arguments with respect to claims 1, 2, 4, 5, 7-10, 12 and 26-28 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

6. Claims 1 and 9 are objected to because of the following informalities:

In claim 1, the third limitation should be changed from "a context processor configured determine" to --a context processor configured to determine--.

In claim 9, the "a" after "includes" in the second limitation needs to be deleted.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 2, 4, 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanevsky et al. (U.S. Pat. 6,434,520).

Kanevsky teaches a handheld personal assistant operated by a user comprising:

a categorizer configured to store a plurality of data items in a database organized by one or more categories of information (indexes audio segments based upon background noise, identity of speaker and content, Fig. 2A and 2B);

a voice-recognizer configured to recognize the user's voice and transform an expression input by the user into a different mode of information (generates a spoken voiceprint of the user, col. 9, lines 9-17);

a context processor configured to determine the category of information corresponding to the expression input by the user, based on one of a direct context specified by the user or an inferred context based on the expression input (performs natural language processing for determining the context in order to search user queries, col. 7, lines 11-15); and

Art Unit: 2655

a natural-language processor configured to process the mode of information to extract, from the database, a piece of information that is personal to the user, wherein upon recognition of the user's voice, the personal assistant only allows the user to access the piece of information that is personal to the user (retrieves segments according to the natural language topic and speaker's voiceprint, col. 9, lines 9-17 and col. 9, line 60 to col. 10 line 9),

and further wherein the natural-language processor can still extract the piece of information when the user declares the expression differently (natural language understanding allows recognition of expressions declared differently, col. 9, line 60 to col. 10, line 9).

9. Regarding claim 2, Kanevsky teaches the processor analyzes the expression grammatically and semantically to transform at least part of the expression into at least one instruction (natural language understanding analyzes text both grammatically and semantically, col. 6 line 62 to col. 7, line 20).

10. Regarding claim 4, Kanevsky teaches that the processor can still extract the piece of information even if the expression is ambiguous (natural language understanding determines the context hence determining the meaning of a word that would be ambiguous, col. 6 line 62 to col. 7, line 20).

11. As per claim 9, Kanevsky teaches:

the piece of information was entered into the assistant by the user (audio stream may be conversational speakers, col. 2, lines 57-66); and

wherein the personal assistant further includes a formatting process that transforms the expression input by the user into a question with one or more

Art Unit: 2655

phrases corresponding to the one or more categories of information, and a transformation process the converts the question into an instruction comprising a query to the database (natural language understanding unit determines the issue or topic of the query and uses this issue to generate a search, col. 7, lines 11-20).

12. As per claim 10, Kanevsky teaches the piece of information was entered through voice (audio stream may be conversational speakers, col. 2, lines 57-66).

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1, 2, 4, 5, 7-10, 12 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasai in view of Alpdemir.

Sasai teaches a handheld personal assistant operated by a user comprising:

a categorizer configured to store a plurality of data items in a database organized by one or more categories of information (private information storage unit stores the information in association with the user intention index and conceptual index hence categorizing the data, col. 6, lines 24-34 and Fig. 5);

Art Unit: 2655

a context processor configured to determine the category of information corresponding to the expression input by the user, based on one of a direct context specified by the user or an inferred context based on the expression input (concept extraction unit and intention interpretation unit process the text through natural language processing hence inferring the context of the input, col. 4, line 45 to col. 5, line 15); and

a natural-language processor configured to process the mode of information to extract, from the database, a piece of information that is personal to the user (the information management unit performs retrieval of data from private information storage unit, col. 5, lines 16-30),

and further wherein the natural-language processor can still extract the piece of information when the user declares the expression differently (user may enter a sentence or a sequence of key words, col. 9, lines 46-51).

Sasai does not teach a voice-recognizer configured to recognize the user's voice and transform an expression input by the user into a different mode of information; wherein upon recognition of the user's voice, the personal assistant only allows the user to access the piece of information that is personal to the user.

Alpdemir teaches a PDA that has natural language speech recognition capabilities that suggests using voice recognition to authenticate a user (col. 6, lines 14-20).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Sasai to authenticate a user for access to the

Art Unit: 2655

user's personal information as taught by Alpdemir because it would make the user's information more secure hence making the user more likely to store the information on the device.

15. Regarding claim 2, Sasai teaches the processor analyzes the expression grammatically and semantically to transform at least part of the expression into at least one instruction (sentence structure analysis and semantic analysis, col. 4, lines 45-50).

16. Regarding claim 4, Sasai teaches that the processor can still extract the piece of information even if the expression is ambiguous (presents plural pieces of information if conditions are not completely met, col. 10, lines 41-46).

17. Regarding claim 5, Sasai suggests the piece of information selected from a list consisting of a personal address book (information is name and phone number, col. 6, lines 30-34) and a to-do-list (list of entries on display, Fig. 1, element 3-2).

Sasai and Alpdemir do not teach the information to be a calendar.

However, the Examiner takes Official Notice that calendars are common in PDA's and it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Sasai and Alpdemir for the information to be a calendar because it allows the user a simple way to keep track and monitor future appointments.

18. As per claim 7, Sasai teaches a display to display the piece of information (Fig. 1, element 3-2).



Art Unit: 2655

19. As per claim 8, Sasai teaches a voice synthesizer that transforms the piece of information into sound to communicate with the person (speech synthesis, col. 4, lines 4-9).

20. As per claim 9, Sasai teaches:

the piece of information was entered into the assistant by the user (user has assistant memorize information, col. 7, lines 38-45); and

wherein the personal assistant further includes a formatting process that transforms the expression input by the user into a question with one or more phrases corresponding to the one or more categories of information, and a transformation process the converts the question into an instruction comprising a query to the database (concept extract unit extract conceptual elements from the input and these conceptual elements are converted into a intention for retrieval by the intention interpretation unit, col. 4, line 45 to col. 5, line 15).

21. As per claim 10, Sasai teaches the piece of information to be entered through voice (input is speech prior to storage, Fig. 6, elements S61 and S65).

22. As per claim 12, Sasai teaches that if the assistant cannot resolve an ambiguity in the expression, the personal assistant provides the person with a number of alternatives to resolve the ambiguity (presents plural pieces of information if conditions are not completely met, col. 10, lines 41-46).

23. As per claim 26, Sasai teaches a method for obtaining information for a requestor interacting with a handheld computing device, said method comprising:

storing a plurality of data items in a database organized by one or more categories of information (private information storage unit stores the information

Art Unit: 2655

in association with the user intention index and conceptual index hence categorizing the data, col. 6, lines 24-34 and Fig. 5);

receiving an input voice expression from the requestor and converting the input voice expression into a text string (interfacing unit, col. 4, lines 28-33);

processing the text string using grammatical and semantic processing to determine a natural language meaning for the text string (sentence structure analysis, semantic analysis and intention extraction unit, col. 4, lines 45-50, lines 66-67 and col. 5, lines 1-15);

determining a category of information corresponding to the input by the requestor based on one of a direct context specified by the requestor or an inferred context based on the expression input (concept extraction unit and intention interpretation unit process the text through natural language processing hence inferring the context of the input, col. 4, line 45 to col. 5, line 15); and

processing the natural language meaning for the text string to extract, from the database, a piece of information from the category of information (the information management unit performs retrieval of data from private information storage unit, col. 5, lines 16-30).

Sasai does not teach recognizing the requestor's voice in order to retrieve information personal to the requestor and only for the requestor upon recognition of the requestor's voice.

Alpdemir teaches a PDA that has natural language speech recognition capabilities that suggests using voice recognition to authenticate a user (col. 6, lines 14-20).

Art Unit: 2655

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Sasai to authenticate a user for access to the user's personal information as taught by Alpdemir because it would make the user's information more secure hence making the user more likely to store the information on the device.

24. As per claim 27, Sasai teaches transforming the expression input by the user into a question and converting the question into an instruction comprising a query to the database (concept extract unit extract conceptual elements from the input and these conceptual elements are converted into a intention for retrieval by the intention interpretation unit, col. 4, line 45 to col. 5, line 15).

25. As per claim 28, Sasai teaches presenting the retrieved information to the requestor (output the information to the interfacing unit, col. 5, lines 16-22).

### ***Conclusion***

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

Art Unit: 2655


action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J Sked whose telephone number is (571) 272-7627. The examiner can normally be reached on Mon-Fri (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L Ometz can be reached on (571)272-7593. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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DAVID L. OMETZ  
PRIMARY EXAMINER